

**Attorney Docket No. 13DV-13124-2 (07783-0149-D2)**  
**Application No. 10/663,320**

**D) AMENDMENTS TO THE DRAWINGS**

None.

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**E) REMARKS/ARGUMENTS**

This Response is filed in response to an Office Action dated October 3, 2005.

Upon entry of this response, claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39 will be pending in the Application.

In the outstanding Office Action, the Examiner rejected claims 17-19, 21-23, 25-36 and 38-39 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, rejected claims 17, 26, 30, 32, 36, 36 and 38 under 35 U.S.C. § 103(a) as being obvious over Phillips et al. (US 5,424,119) (hereinafter "Phillips"), rejected claims 17-19, 21-23, 26, 28, 30-32, 36 and 38 under 35 U.S.C. § 103(a) as being obvious over Masumoto et al. (U.S. Patent No. 4,891,068) (hereinafter "Masumoto"), and objected to the specification as containing new matter.

A telephone interview was conducted on December 30, 2005 between Examiner Jolley and Attorney for Applicant Jonathan Miller. During the interview, the Examiner indicated that the prior art rejections and the new matter rejections may be obviated if the references to "electrically non-conductive" is deleted from the claims and the surface recited in the claim is a "surface of a gas turbine engine component", as recited previously in at least dependent claims 25, 29, 33 and 35. In response to the interview with the Examiner, the Applicant has amended the claims in a manner believed to comply with the Examiner's suggestion. Accordingly, the Applicant believes that the claims are in condition for allowance and respectfully requests the withdrawal of the outstanding objections and rejections and further requests allowance of claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39.

**Rejection under 35 U.S.C. § 103(a)**

The Examiner rejected claims 17, 26, 30, 32 and 36 under 35 U.S.C. § 103(a) as being obvious over Phillips.

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Applicants respectfully traverse the rejection of claims 17, 26, 30, 32 and 36 under 35 U.S.C. § 103(a) by Phillips.

The following principle of law applies to all Section 103 rejections. MPEP 2143.03 provides "To establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references, each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the applied prior art reference, applied individually, clearly do not arguably teach some limitations of the claims.

Phillips, as understood, is directed toward a polymeric sheet comprising a layer of polymeric material having a first and second parallel surfaces. A plurality of oriented multilayer interference thin film flakes are disposed in the layer of polymeric material. The flakes have first and second parallel surfaces and a width and a thickness and have an aspect ratio of at least 2:1 for the width with respect to the thickness.

In contrast, amended independent claim 17 is directed to a method for orienting with respect to a gas turbine engine component article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic medium having a viscosity which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the medium being in a fluid condition with the viscosity selected to provide a selected surface tension in the medium. The method further comprises disposing the medium with the particles on a surface of a gas turbine engine component article, the article surface having a complex, three-dimensional, non-planar shape. The method further comprises maintaining the medium in the fluid condition for

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a time selected to enable the surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed, the particles being physically separated from one another.

At least one feature recited by Applicants in independent claim 17 is not taught or suggested by Phillips. Specifically, Phillips does not teach a gas turbine engine component surface, as instantly claimed. As Phillips does not teach or suggest all of the limitations of independent claim 17, Applicants respectfully submit that Phillips does not render Applicants' invention obvious as recited in independent claim 17.

Dependent claims 18-19 and 21-23 are believed to be allowable as depending from what is believed to be allowable independent claim 17 for the reasons given above. It is respectfully submitted that claims 17-19 and 21-23 are not anticipated nor rendered obvious by Phillips and are therefore allowable.

Independent claim 26, as amended, is directed to a method for orienting with respect to a gas turbine engine component article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic matrix having a viscosity which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the matrix being in a fluid condition with the viscosity and concentration selected to provide a selected surface tension in the matrix. The method further comprises disposing the matrix with the particles on a surface of a gas turbine engine component article, the gas turbine engine component article surface having a complex, three-dimensional, non planar shape. The method further comprises maintaining the matrix in the fluid condition for a time selected to enable surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed, the particles being physically separated from one another.

At least one of the features recited by Applicants in independent claim 26, as

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amended, is not taught or suggested by Phillips. Specifically, Phillips does not teach gas turbine engine component surface, as instantly claimed. As Phillips does not teach or suggest all of the limitations of independent claim 26, Applicants respectfully submit that Phillips does not render Applicants' invention obvious as recited in independent claim 26.

Dependent claims 27-28 and 30-31 are believed to be allowable as depending from what is believed to be allowable independent claim 26 for the reasons given above. It is respectfully submitted that claims 27-28 and 30-31 are not anticipated nor rendered obvious by Phillips and are therefore allowable.

Independent claim 32, as amended, is directed to a method for orienting with respect to a gas turbine engine component article surface a plurality of non-spherical particles. The method comprises disposing non-spherical metal particles in a non-metallic medium having a viscosity which can be increased, each particle including a major dimension, and each particle being capable of being moved by a force applied to each particle, the medium being in a fluid condition with a viscosity and a concentration selected to provide a selected surface tension in the medium. The method further comprises disposing the medium with the particles on the gas turbine engine component article surface, the article surface having a complex three-dimensional, non-planar shape. The method further comprises maintaining the medium in the fluid condition for a time selected to enable a combination of gravity and surface tension to locate at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed, the particles being physically separated from one another.

At least one of the features recited by Applicants in independent claim 32 is not taught or suggested by Phillips. Specifically, Phillips does not teach a gas turbine engine component surface, as instantly claimed. As Phillips does not teach or suggest all of the limitations of independent claim 32, Applicants respectfully submit that Phillips does not render Applicants' invention obvious as recited in independent claim 32.

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Dependent claims 34, 36 and 38-39 are believed to be allowable as depending from what is believed to be allowable independent claim 32 for the reasons given above. It is respectfully submitted that claims 34, 36 and 38-39 are not anticipated nor rendered obvious by Phillips and are therefore allowable.

**Rejection under 35 U.S.C. § 103(a)**

The Examiner rejected claims 17-19, 21-23, 26, 28, 30-32, 36 and 38 under 35 U.S.C. 103(a) as being anticipated by Masumoto.

Applicants respectfully traverse the rejection of claims 17-19, 21-23, 26, 28, 30-32, 36 and 38 under 35 U.S.C. § 103(a) as obvious over Masumoto

Masumoto, as understood, is directed toward an additive powder for coating materials or plastics, comprising a particle of a metal or glass, comprised of a particle having a thickness of 0.5 to 5 $\mu$ m, a minor axis/major axis of from 5 to 500 $\mu$ m, an aspect ratio (ratio of the major axis to the thickness) of not less than 5, and a ratio of the minor axis to the major axis, of from 1 to 10, and having the shape of a leaf as a whole. This powder can be prepared by melting a metal or glass, bringing the resulting melt to flow out from a nozzle and jetting a gas to the melt to form droplets of the melt, and bringing said droplets, before they solidify, to collide against the surface of a rotating cooling member having the shape of a cone or a horn and provided in the direction of the flow of said droplets, followed by cooling to effect solidification. This powder can readily cause the leafing phenomenon when added in coating materials and coated, and hence the coating surface can be effectively covered with the powder, so that it can impart superior corrosion resistance and weathering resistance as compared with conventional powder. It can also impart superior electromagnetic shielding properties when added in plastics or rubbers.

The method of amended claim 17 is set forth above and will not be repeated here.

At least one feature recited by Applicants in independent claim 17 is not taught or suggested by Masumoto. Specifically, Masumoto does not teach a gas turbine

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engine component surface, as instantly claimed. As Masumoto does not teach or suggest all of the limitations of independent claim 17, Applicants respectfully submit that Masumoto does not render Applicants' invention obvious as recited in independent claim 17.

Dependent claims 18-19 and 21-23 are believed to be allowable as depending from what is believed to be allowable independent claim 17 for the reasons given above. It is respectfully submitted that claims 17-19 and 21-23 are not anticipated nor rendered obvious by Masumoto and are therefore allowable.

The method of amended claim 26 is set forth above and will not be repeated here.

At least one of the features recited by Applicants in independent claim 26, as amended, is not taught or suggested by Masumoto. Specifically, Masumoto does not teach gas turbine engine component surface, as instantly claimed. As Masumoto does not teach or suggest all of the limitations of independent claim 26, Applicants respectfully submit that Masumoto does not render Applicants' invention obvious as recited in independent claim 26.

Dependent claims 27-28 and 30-31 are believed to be allowable as depending from what is believed to be allowable independent claim 26 for the reasons given above. It is respectfully submitted that claims 27-28 and 30-31 are not anticipated nor rendered obvious by Masumoto and are therefore allowable.

The method of amended claim 32 is set forth above and will not be repeated here.

At least one of the features recited by Applicants in independent claim 32 is not taught or suggested by Masumoto. Specifically, Masumoto does not teach a gas turbine engine component surface, as instantly claimed. As Masumoto does not teach or suggest all of the limitations of independent claim 32, Applicants respectfully submit that Masumoto does not render Applicants' invention obvious as recited in independent claim 32.

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Dependent claims 34, 36 and 38-39 are believed to be allowable as depending from what is believed to be allowable independent claim 32 for the reasons given above. It is respectfully submitted that claims 34, 36 and 38-39 are not anticipated nor rendered obvious by Masumoto and are therefore allowable.

In view of the above, claims 17-19, 21-23, 26-28, 34, 36 and 38-39 are neither anticipated nor rendered obvious, by Phillips and/or Masumoto. Therefore, Applicant respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a) and allowance of claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39.

**Baldi in view of Masumoto**

It is noted that the Examiner indicated that a rejection under 35 U.S.C. § 103(a) over Baldi in view of Masumoto may be reinstated if Applicants merely deleted the alleged new matter from claims 17, 26 and 32. The Applicants note that the amendments to the claims have cancelled the subject matter deemed to be new matter by the Examiner, but contains limitations to the particles "being physically separated from each other", which finds support in at least each of Figures 1-3 and 5-10 and in paragraphs [0027], [0028] and [0045]. As with Masumoto, Baldi neither teaches nor suggests the ultimate result of the particles being physically separated from one another. As Examiner noted in the previous Office Action, "Baldi teaches that the increased protection is greatly improved if the aluminum coating is effectively continuous over the surface being protected." (col. 5, lines 8-15) Thus, Examiner admits that Baldi teaches away from the physical separation of the particles. Baldi's teaching simply reinforces the fact that in order to obtain corrosion protection from the powder particles, the leafing-type aluminum flakes of Baldi must necessarily overlap one another on the coating surface. As Baldi clearly teaches away from Applicants amended independent claim 32, Baldi may not properly be combined with Masumoto to create a 103 rejection of claim 32. Therefore, Applicants respectfully assert that the rejection over Baldi in view of Masumoto should not be reinstated.



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**Rejection under 35 U.S.C. § 112, First Paragraph**

The Examiner rejected claim 17-19, 21-23, 25-36, and 38-39 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner stated the following:

"[t]he claims(s) contains subject matter which was described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inentor(s), at the time the application was filed, had possession of the claimed invention. In claims 17, 26 and 32, the newly-added limitations 'disposing... particles in a ... electrically non-conductive medium [or matrix]' and 'the particles being physically separated from one another such that the medium [or matrix] remains electrically non-conductive', appear to be new matter."

In response, Applicants have removed the language objected to by the Examiner from claims 17, 26, and 32. Applicants submit that claims 17, 26, and 32 no longer fail to comply with 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully request reconsideration and withdrawal of the rejections of claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39 under 35 U.S.C. § 112, first paragraph.

**Objection to the Specification**

The Examiner rejected the disclosure because the amendment filed July 11, 2005 "introduces new matter into the disclosure."

In response, Applicants have amended the specification to remove the paragraphs objected to by the Examiner. Applicants submit that no new matter has been added as a result of this amendment to the specification and submits that the objection over the specification under 35 U.S.C. § 132(a) should be withdrawn.

**CONCLUSION**

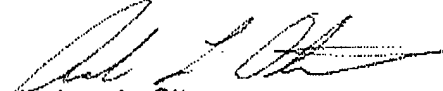
In view of the above, Applicants respectfully request reconsideration of the Application and withdrawal of the outstanding objections and rejections. As a result of

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the amendments and remarks presented herein, Applicants respectfully submit that claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39 are neither anticipated nor rendered obvious, by Phillips, Masumoto, and/or Baldi, and thus are in condition for allowance. In addition Applicants respectfully request reconsideration and withdrawal of the objections to claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39 under 35 U.S.C. 112, first paragraph. As the claims are not anticipated nor rendered obvious by the applied art in view of the applied art, Applicants request allowance of claims 17-19, 21-23, 26-28, 30-32, 34, 36 and 38-39 in a timely manner. Applicants also request that Examiner reconsider and withdraw the objection to the specification. Applicants submit that no new matter has been added by the amendments to the claims and specification. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact the Applicants.

The Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 50-1059.

Respectfully submitted,  
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